

## ABSTRACT

A semiconductor laser, such as surface emitting laser, is disclosed. According to one embodiment, the laser includes a first reflector assembly having an upper face, a second reflector assembly having a lower face that faces the upper face of the first reflector assembly, and a phase conjugator between the first and second reflector assemblies. The phase conjugator includes a first semiconductor active region parallel to the upper face of the first reflector assembly and the lower face of the second reflector assembly, a second semiconductor active region that is not parallel to first semiconductor active region, and a third semiconductor active region that is not parallel to the first semiconductor active region.